

Application Serial No. 10/664,199
Attorney Docket No. DEP5157
Group Art Unit: 3733

Amendments to the Claims:

The listing of the claims set forth below will replace all prior versions, and listings, of claims in the application

Listing of Claims:

1. (Currently Amended) A bone fixation system comprising: a bone anchor having a proximal head and a distal portion configured to engage bone, and a plate having at least one hole for receiving the bone anchor, the at least one hole including a plurality of concentric annular bores formed in the plate, at least one of the plurality of concentric annular bores being sized and shaped to engage the proximal head of the bone anchor to facilitate coupling of the bone anchor to the plate, the plurality of concentric annular bores including a first bore having a first diameter and a second bore having a second diameter different from the first diameter.

2. (canceled)

3. (Currently Amended) The bone fixation system of claim [[2]]1, wherein the first bore is proximate the proximal surface of the plate relative to the second bore and the second diameter is less than the first diameter.

4. (Original) The bone fixation system of claim 1, where the proximal head is threadless.

5. (Original) The bone fixation system of claim 1, wherein the proximal head tapers toward the distal portion.

6. (Withdrawn) The bone fixation system of claim 1, wherein at least one of the plurality of concentric annular bores includes a barb to inhibit back-out of the bone anchor from the plate.

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7. (Currently Amended) A bone plate comprising: a body portion having at least one hole for receiving a bone anchor, the at least one hole including a plurality of annular concentric bores formed in the plate, at least one of the plurality of annular concentric bores being sized and shaped to engage the proximal head of the bone anchor to facilitate coupling of the bone anchor to the plate, the plurality of concentric annular bores forming a generally frusta-conically shaped, stepped inner wall surface of the hole.

8. (Canceled)

9. (Withdrawn) The bone plate of claim 8, wherein at least one bore of the plurality of concentric annular bores includes a barb to inhibit back-out of the bone anchor from the plate.

10. (Original) A bone plate comprising: a body portion having at least one hole for receiving a bone anchor, the at least one hole having a generally stepped-shaped inner wall surface provided by a plurality of steps formed in the inner wall of the hole, each step having a annular peak, a plurality of the annular peaks being aligned in a generally frusta-conical shape.

11. (Original) The bone plate of claim 10, wherein the steps are symmetric about an axis of the hole.

12. (Original) A bone fixation system comprising: a bone plate having a plurality of plate holes for receiving a bone anchor therein, and a plurality of bone anchors for coupling the bone plate to bone, at least one of the bone anchors having a tapered proximal head and a distal portion configured to engage bone, the proximal head of the at least one anchor tapering toward the distal portion of the bone anchor, at least one of the plates holes having a generally stepped-shaped inner wall surface provided by a plurality of steps formed in the inner wall of the at least one plate hole, a plurality of the steps having a generally annular peak, a plurality of the peaks being aligned in a generally frusta-conical shape to facilitate

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gripping engagement of the tapered proximal head of a bone anchor upon advancement of the bone anchor into the plate hole.

13. (Original) The bone fixation system of claim 12, wherein each annular peak of a plate hole defines a peak plane that intersects the axis of the hole.

14. (Original) The bone fixation system of claim 13, wherein at least one of the peak planes is oriented perpendicular to the axis of the hole.

15. (Withdrawn) The bone fixation system of claim 13, wherein at least one of the peak planes is oriented at angle other than perpendicular to the axis of the hole.

16. (Original) The bone fixation system of claim 13, wherein a plurality of the peak planes are parallel to one another.